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10/705,461

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EXAMINER

GOFF II, JOHN L

ART UNIT

PAPER NUMBER

1733

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/705,461

Applicant(s)

SHINOHARA ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/778,232.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/18/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed on 10/13/06.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1, 2, 10-12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka et al. (JP 10-312591 and see also the abstract and machine translation) in view of Naka et al. (U.S. Patent 5,935,331) and Morley (U.S. Patent 4,724,296).

Otsuka et al. disclose an apparatus capable of bonding two optical disc substrates together. Otsuka et al. teach the apparatus comprises a lower mounting support capable of mounting an optical disc substrate and capable of spinning, an upper mounting support opposed to the lower mounting support capable of mounting an optical disc substrate, an adhesive-supplying nozzle perpendicular to the lower mounting support with its tip pointing downward

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capable of supplying a ring shaped adhesive liquid film and/or a dot-shaped adhesive liquid film onto an optical disc substrate while the substrate is spinning, and a lifting member, i.e. joining apparatus, capable of moving the upper mounting support toward the lower mounting support (Figure 1 and Paragraphs 16-20). Otsuka et al. are silent as to using the adhesive-supplying nozzle as an electrode that cooperates with a second electrode adjacent the lower mounting support capable of forming an electrical field therebetween. Naka et al. disclose an apparatus capable of uniformly applying a liquid coating to a substrate such as an optical disc comprising a lower mounting support capable of supporting a substrate, a liquid coating nozzle perpendicular to the lower mounting support with its tip pointing downward capable of supplying a liquid adhesive onto a substrate wherein the liquid coating nozzle is a first electrode, connected to a terminal of an electric power supply, that cooperates with a second electrode adjacent the lower mounting support, which is connected to another terminal of the electric power supply, capable of forming an electrical field therebetween to uniformly deposit a thin film of the liquid coating by electrostatic force (Figure 11 and Column 14, lines 22-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adhesive-supplying nozzle in Otsuka et al. as an electrode that cooperates with a second electrode adjacent the lower mounting support as shown by Naka et al. such that the apparatus is capable of uniformly applying the adhesive as a thin film, i.e. form products of reduced thickness.

Regarding the limitation that the liquid coating nozzle is connected to a terminal of the electric power supply and a ground potential, it is noted Naka et al. do not specifically show the connection of the liquid coating nozzle to a ground potential. However, Naka et al. are merely silent as to connecting the liquid coating nozzle to a ground potential. It is well taken in the art

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of electrode apparatus which include first and second opposed electrodes capable of forming an electric field therebetween that not only are the electrodes connected a power supply but the electrodes are also connected to a ground potential for safety reasons as shown by Morley (Figure 1 and Column 1, lines 31-46 and Column 2, lines 43-66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in Otsuka et al. as modified by Naka et al. a connection between the liquid coating nozzle and a ground potential as shown by Morley for well known safety reasons.

Regarding the limitations in the claims directed to the material worked upon, i.e. the optical disc substrates and the adhesive, it is noted the material worked upon is given little weight in determining the patentability of the apparatus (See MPEP 2115) other than the apparatus taught by Otsuka et al. as modified by Naka et al. and Morley is capable of working on the material.

Regarding the limitations in the claims directed to functional language/intended use, i.e. the supplying of an adhesive to one or both of optical disc substrates, the generating of an electric field, the joining of two optical disc substrates, the curing the adhesive, the rotating/spinning of the optical discs, the application of a ring-shaped or dot-shaped adhesive, and the application of a liquid adhesive including a tapered end, it is noted a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim (See MPEP 2114). The structural limitations disclosed by Otsuka et al. as modified by Naka et al. and Morley meet the claimed structural limitations, and

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as such the apparatus disclosed by Otsuka et al. as modified by Naka et al. and Morley is capable of performing the functional limitations/intended use.

5. Claims 3, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka et al., Naka et al., and Morley as applied to claims 1, 2, 10-12, 14 and 15 above, and further in view of Kotoyori et al. (JP200036134 with U.S. Patent 6,228,203 used as an English translation).

Regarding claim 3, Otsuka et al., Naka et al., and Morley as applied above teach all of the limitations in claim 3 except for a specific teaching of using a plurality of adhesive-supplying nozzles in a circular shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the adhesive-supplying nozzle taught by Otsuka et al. as modified by Naka et al. and Morley a plurality of adhesive-supplying nozzles in a circular shape as shown by Kotoyori et al. such that the apparatus is capable of quickly applying the adhesive.

Regarding claim 13, Otsuka et al. and Naka et al. as applied above teach all of the limitations in claim 13 except for a specific teaching of the lifting member moving the lower mounting support toward the upper mounting support as opposed to moving the upper mounting support toward the lower mounting support as taught by Otsuka et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the lifting member taught by Otsuka et al. as modified by Naka et al. and Morley to move the lower mounting support toward the upper mounting support as opposed to the opposite as using the lifting member in this manner was known as shown by Kotoyori et al. wherein only the expected results of moving the upper and lower mounting supports toward each other would be achieved.

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Regarding claim 16, Otsuka et al. and Naka et al. as applied above teach all of the limitations in claim 16 except for a specific teaching of rotating the adhesive-supplying nozzle relative to the lower mounting support as opposed to rotating the lower mounting support relative to the adhesive-supplying nozzle as taught by Otsuka et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to rotate the adhesive-supplying nozzle and lower mounting support relative to each other as taught by Otsuka et al. as modified by Naka et al. and Morley by rotating the adhesive-supplying nozzle relative to the lower mounting support which was known as shown by Kotoyori et al. wherein only the expected results of rotating the adhesive-supplying nozzle and lower mounting support relative to each other would be achieved.

Kotoyori et al. disclose an apparatus capable of bonding two optical disc substrates together comprising a lower mounting support capable of mounting an optical disc substrate, an adhesive-supplying nozzle or plurality of adhesive-supplying nozzles in a circular shape perpendicular to a lower mounting support with its tip(s) pointing downward capable of supplying a ring shaped adhesive liquid film and/or a dot-shaped adhesive liquid film onto an optical disc substrate while the nozzle(s) is spinning, an upper mounting support opposed to the lower mounting support capable of mounting an optical disc substrate, and a lifting member capable of moving the lower mounting support toward the upper mounting support (Figures 1, 3, and 6A-6D and Column 4, lines 43-51 and Column 5, lines 10-23 and 51-57 and Column 6, lines 1-3 and Column 6, lines 60-67).

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6. Claims 4, 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka et al., Naka et al., and Morley as applied to claims 1, 2, 10-12, 14 and 15 above, and further in view of Hayashi et al. (U.S. Patent 5,102,629).

Otsuka et al., Naka et al., and Morley teach all of the limitations in claims 4, 5, 7, and 8 except for a specific teaching of the electric power supply generating alternating or direct current, it being noted at least one of alternating or direct current must be present such that the electrodes are capable of forming an electric field therebetween. Hayashi et al. are exemplary of forming an electric field between two electrodes by supplying one of alternating or direct current to the electrodes (Column 1, lines 13-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the electric power supply in Otsuka et al. as modified by Naka et al. and Morley to generate one of alternating or direct current as was well known to form an electric field between two electrodes as shown by Hayashi et al. as only the expected results would be achieved.

7. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka et al., Naka et al., Morley, and Kotoyori et al. as applied to claims 3, 13, and 16 above, and further in view of Hayashi et al.

Claims 6 and 9 are rejected in the same manner as that set forth above in paragraph 6.

Response to Arguments

8. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

In view of applicants amendment to require the adhesive-supplying nozzle is connected to a ground potential Morley is applied above.

Applicants argue, "Applicants further suggest that by connecting the adhesive-supplying nozzle to both an electric power supply and a ground potential, a substantial advantage may be realized. In particular, the stored adhesive within the apparatus of claim 1 is not charged by virtue of being in contact with the adhesive present in the adhesive-supplying nozzle itself. This maintains the stability of the adhesive, and the effect of the voltage impression can therefore be heightened. This is in contrast with the disclosure of Naka et al., which suggests that the uniformity of an applied thin film can be improved by electrically charging the discharge liquid (at col. 12, line 9 to col. 13, line 3). In particular, Fig. 9 shows a potential being applied to the liquid stored in the apparatus of Naka et al."

It is noted that Naka et al. as applied is in reference to embodiment 4 shown in Figure 11. Figure 9 is a different embodiment described by Naka et al. wherein the discharge liquid is shown as charged by virtue of connecting the discharge liquid with the electric power supply. Figure 11 on the other hand clearly shows the liquid coating nozzle electrode and not the discharge liquid as connected to the electric power supply wherein the discharge liquid is thus not charged such that applicants arguments regarding Figure 9 of Naka et al. are not persuasive. Applicants have not shown any unexpected benefit for connecting the liquid coating nozzle electrode to the electric power supply and to a ground potential and compared that with Figure

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11 of Naka et al. As set forth above the connection between the nozzle electrode and the ground potential is considered obvious as a usual procedure for safety reasons as shown by Morley.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John L. Goff
Patent Examiner
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